

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 7279 (1992): Test Chart for Woodworking Single Spindle Boring Machines [PGD 3: Machine Tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



IS 7279 : 1992

ISO 7945 : 1985

भारतीय मानक

एकल तर्कु बेधन वाली काष्ठकर्म मशीन का
परीक्षण चार्ट

(पहला पुनरीक्षण)

Indian Standard

TEST CHART FOR WOODWORKING SINGLE
SPINDLE BORING MACHINES

(First Revision)

UDC 674'055 : 621'952 : 620'1 (084'3)

© BIS 1992

BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

March 1992

Price Group 4

Indian Standard
**TEST CHART FOR WOODWORKING SINGLE
SPINDLE BORING MACHINES**
(First Revision)

NATIONAL FOREWORD

This Indian Standard (First Revision) which is identical with ISO 7945 : 1985 'Wood-working machines — Single spindle boring machines — Nomenclature and acceptance conditions', issued by the International Organization for Standardization (ISO), was adopted by the Bureau of Indian Standards on the recommendations of Woodworking Machines Sectional Committee (PE 01) and approval of the Production Engineering Division Council.

This standard was first issued in 1974. Consequent upon the publication of ISO 7945 : 1985, this standard has been revised by adopting ISO 7945 : 1985 to bring it in line with ISO standard. In this revision, clause references of ISO 230/1 : 1986 for method of tests has been incorporated which were not there earlier.

The text of the ISO Standard has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to ISO/R 230 'Test code for machine tools' (since revised as ISO 230/1 : 1986). The Indian Standard IS 2063 : 1988 Acceptance code for machine tools — Geometric accuracy of machines operating under no load or finishing conditions (*first revision*) which is identical with ISO 230/1 : 1986 is to be substituted in its place.

Only the English language text of the International Standard has been retained while adopting it as Indian Standard.

As in the Original Standard, this Page is Intentionally Left Blank

1 Scope and field of application

This International Standard specifies the nomenclature appropriate to each part of the machine and, with reference to ISO/R 230, the geometrical tests for single spindle boring machines, and gives the corresponding permissible deviations which apply to machines for general purpose use and normal accuracy.

NOTE — In addition to terms used in two of the three official ISO languages (English and French), this International Standard gives in the annex the equivalent terms in German, Italian and Swedish; these have been included at the request of Technical Committee ISO/TC 39 and are published under the responsibility of the member bodies for Germany, F.R. (DIN), Italy (UNI) and Sweden (SIS). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

This International Standard deals only with the verification of accuracy of the machine. It does not apply to the testing of the running of the machine (vibrations, abnormal noises, stick-slip motion of the components, etc.), nor to its characteristics (speeds, feeds, etc.) which should generally be checked before testing accuracy.

This International Standard does not impose any practical test. For single spindle boring machines, practical tests should be exceptions and have to be stated in a previous agreement between the producer and the user.

2 Reference

ISO/R 230, *Test code for machine tools*.

3 Preliminary remarks

3.1 In this International Standard all dimensions and permissible deviations are expressed in millimetres..

3.2 To apply this International Standard, reference should be made to ISO/R 230, especially for installation of the machine before testing, the warming up of the main spindle of the machine and other moving parts, and description of measuring methods. The measuring instruments shall not permit errors over 1/3 of the checked tolerances.

3.3 The sequence in which the geometrical tests are given is related to the sub-assemblies of the machine and this in no way defines the practical order of testing. In order to make mounting of instruments or gauging easier, tests may be applied in any order.

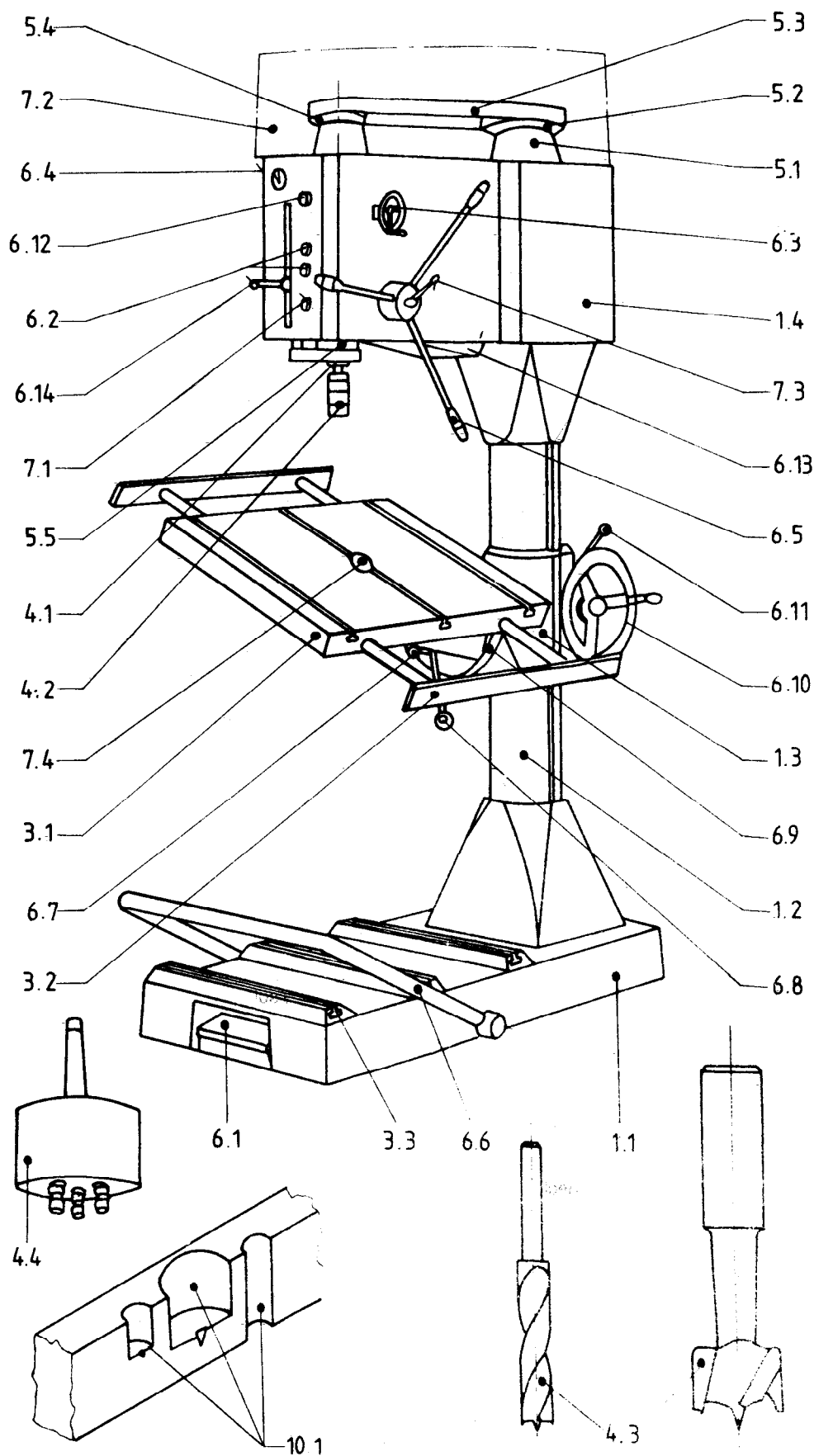
3.4 When inspecting a machine, it is not always possible or necessary to carry out all the tests given in this International Standard.

3.5 It is up to the user to choose, in agreement with the manufacturer, those tests relating to the properties which are of interest to him, but these tests are to be clearly stated when ordering a machine.

3.6 A movement is longitudinal when it takes place in the working direction of the piece.

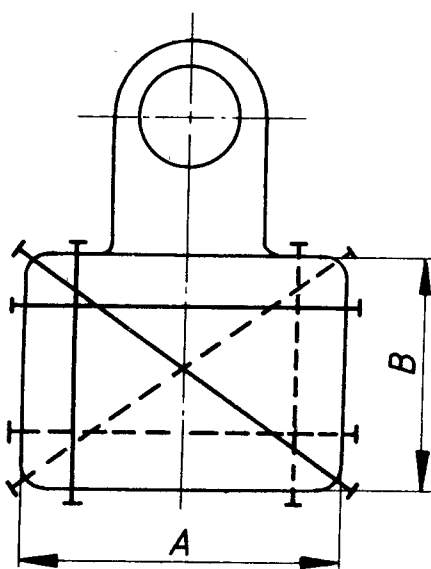
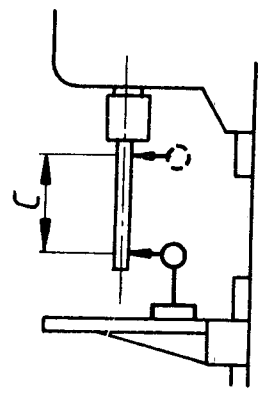
3.7 When establishing the tolerance for a measuring range different from that given in this International Standard (see 2.311 in ISO/R 230), it should be taken into consideration that the minimum value of the tolerance is 0,01 mm.

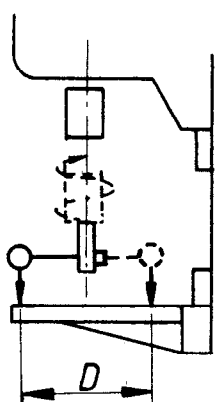
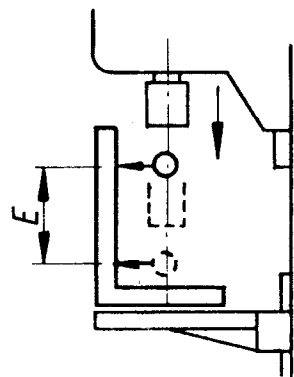
4 Nomenclature



Reference	English	French
	Single spindle boring machine	Perceuse monobroche
1	Framework	Ossature
1.1	Base	Socle
1.2	Column	Colonne
1.3	Support	Support
1.4	Head	Tête
2	Feed of workpiece and/or tools	Déplacement des pièces et/ou outils
3	Workpiece support clamp and guide	Support, maintien et guidage des pièces
3.1	Table	Table
3.2	Table extension	Allonge de table
3.3	Supports on column base	Taques sur socle
4	Toolholders and tools	Porte-outils et outils
4.1	Drilling spindle	Broche de perçage
4.2	Drilling chuck	Mandrin de perçage
4.3	Drill	Mèche
4.4	Multispindle end	Embout multibroches
5	Workheads and tool drives	Unité de travail et son entraînement
5.1	Motor	Moteur
5.2	Motor pulley	Poulie du moteur
5.3	Drive belt	Courroie d'entraînement
5.4	Spindle pulley	Poulie de broche
5.5	Spindle sleeve	Douille de broche
6	Controls	Commandes
6.1	Foot operated switch	Commutateur au pied
6.2	Hand operated switch	Commutateur manuel
6.3	Speed adjustment control	Commande de réglage des vitesses
6.4	Speed indicator	Indicateur de vitesses
6.5	Hand adjusted spindle travel operation	Commande de descente manuelle de broche
6.6	Foot adjusted spindle travel operation	Pédale de commande de descente de broche
6.7	Positioning pin for table — horizontal	Goupille de positionnement de la table horizontal
6.8	Table clamping lever	Levier de blocage de la table
6.9	Graduated scale	Échelle graduée
6.10	Handwheel for adjusting table height	Commande de réglage en hauteur de la table
6.11	Clamping lever to table height	Levier de blocage en hauteur de la table
6.12	Light switch	Interrupteur de lampe d'éclairage
6.13	Light	Lampe
6.14	Drill depth adjuster	Réglage de la profondeur de perçage
7	Safety devices (examples)	Dispositifs de sécurité (exemples)
7.1	Emergency stop	Interrupteur d'urgence
7.2	Hood	Capot
7.3	Cut-out lever (for use when drilling with foot pedal)	Levier de débrayage (perçage par pédale)
7.4	Table insert (replaceable)	Rondelle de table en bois (interchangeable)
8	Miscellaneous	Divers
9	Free	Libre
10	Examples of work	Exemples de travail
10.1	Blind hole and through hole	Trou borgne et trou débouchant

5 Acceptance conditions and permissible deviations – Geometrical tests

No.	Diagram	Object	Permissible deviation	Measuring instruments	Observations and references in test code ISO/R 230
G1	 <p>A = length of the table B = width of the table</p>	<p>Checking of flatness of the table :</p> <p>a) longitudinal straightness</p> <p>b) transverse straightness</p> <p>c) diagonal straightness</p>	<p>a)</p> <p>0,10 for $A < 500$</p> <p>0,20 for $A > 500$</p> <p>b)</p> <p>0,05 for $B < 200$</p> <p>0,10 for $B > 200$</p> <p>c)</p> <p>0,15 for $A < 500$</p> <p>0,30 for $A > 500$</p>	Straightedge and gauges	Clause 5.322
G2		Measuring of the run-out of the spindle	<p>0,35 for $C = 150$</p>	Dial gauge and test mandrel	Clause 5.612.3

No.	Diagram	Object	Permissible deviation	Measuring instruments	Observations and references in test code ISO/R 230
G3		Checking of squareness of the spindle axis to the table surface	0,30/400*	Dial gauge	Clause 5.512.42 * Distance <i>D</i>
G4		Checking of squareness of the spindle movement to the table surface	0,30/150*	Dial gauge and steel square	Clause 5.522.2 * Distance <i>E</i>

Bureau of Indian Standard

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Revision of Indian Standards

Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No. PE 01 (5338)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters :

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices :

	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	{ 311 01 31 331 13 75
Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola CALCUTTA 700054	37 86 62
Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036	53 38 43
Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113	235 02 16
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) BOMBAY 400093	6 32 92 95
Branches : AHMADABAD, BANGALORE, BHOPAL, BHUBANESHWAR, COIMBATORE, FARIDABAD, GHAZIABAD, GUWAHATI, HYDERABAD, JAIPUR, KANPUR, LUCKNOW, PATNA, THIRUVANANTHAPURAM.	